

**ABSTRACT OF THE DISCLOSURE**

A gas-selective permeable membrane (1) utilisable in a leak detector for a gas, more particularly helium, comprising a sheet-like body (11) on which at least one reduced thickness area (15) is defined by removing a material from the sheet-like body. This at least one reduced  
5 thickness area (15) being permeable to at least one gas and formed so as that it is partly surrounded by a thicker and substantially gas-impermeable area (16) ensuring the structural strength of said membrane.